

EXHIBIT B



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U.S. Securities and Exchange Commission

UNITED STATES OF AMERICA Before the SECURITIES AND EXCHANGE COMMISSION

INVESTMENT ADVISERS ACT OF 1940
Release No. 2192 / November 13, 2003

INVESTMENT COMPANY ACT OF 1940
Release No. 26255 / November 13, 2003

ADMINISTRATIVE PROCEEDING
File No. 3-11317

In The Matter of : ORDER MAKING FINDINGS AND IMPOSING PARTIAL
: RELIEF, INCLUDING A FINAL CENSURE, REMEDIAL
PUTNAM INVESTMENT : UNDERTAKINGS AND A CEASE AND DESIST ORDER
MANAGEMENT, LLC : PURSUANT TO SECTIONS 203(e) AND 203(k) OF THE
: INVESTMENT ADVISERS ACT OF 1940 AND SECTIONS 9
Respondent. : (b) AND 9(f) OF THE INVESTMENT COMPANY ACT OF
: 1940

I.

The Securities and Exchange Commission ("Commission") instituted administrative and cease and desist proceedings pursuant to Sections 203 (e) and 203(k) of the Investment Advisers Act of 1940 ("Advisers Act"), and Sections 9(b) and 9(f) of the Investment Company Act of 1940 ("Investment Company Act") against Putnam Investment Management, LLC ("Putnam" or "Respondent") on October 28, 2003.

II.

Respondent has submitted an Offer of Settlement ("Offer") which the Commission has determined to accept. Solely for the purpose of these proceedings and any other proceedings brought by or on behalf of the Commission, or to which the Commission is a party, and without admitting or denying the findings herein, except as to the Commission's jurisdiction over them and the subject matter of these proceedings and the findings contained in paragraphs 1 and 4 of Section III below, which are admitted, Respondent consents to the entry of this Order Making Findings and Imposing Partial Relief, Including a Final Censure, Remedial Undertakings and a Cease-and-Desist Order Pursuant To Sections 203(e) and 203(k) of the Advisers Act and Sections 9(b) and 9(f) of the Investment Company Act

("Order"), as set forth below.

III.

On the basis of this Order and Respondent's Offer, the Commission finds1 that:

Overview

1. This is a proceeding against Putnam Investment Management LLC, a registered investment adviser located in Boston, Massachusetts. Putnam manages the Putnam Family of Funds, a complex of mutual funds.
2. Beginning in at least 1998, at least six Putnam employees who worked as investment management professionals engaged in excessive short-term trading of Putnam mutual funds in their personal accounts. Four of those employees engaged in such trading in funds over which they had investment decision-making responsibility and had access to non-public information regarding, among other things, current portfolio holdings, valuations and transactions not readily available to all fund shareholders. Short-term trading of mutual fund shares can adversely affect mutual fund shareholders because, among other things, it can dilute the value of their shares, raise transaction costs for the fund, disrupt a fund's stated portfolio management strategy, require a fund to maintain an elevated cash position, and result in lost opportunity costs and forced liquidations. Short-term trading can also result in unwanted taxable capital gains for fund shareholders and reduce the fund's long-term performance. Consequently, mutual fund managers such as Putnam, among other things, often maintain policies and procedures to detect and prevent short-term trading.
3. By at least early 2000, Putnam became aware that several investment management employees were engaging in potentially self-dealing short-term trading of mutual fund shares in their personal accounts. However, Putnam failed to disclose this potentially self-dealing securities trading to the boards of the mutual funds it managed and to the funds' shareholders. Moreover, Putnam also failed to take adequate steps to detect and deter such trading activity through its own internal controls and its supervision of investment management professionals. By virtue of this conduct, Putnam violated its fiduciary duties to Putnam's family of mutual funds in violation of, among other things, the antifraud provisions of the Advisers Act.

Respondent

4. **Putnam Investment Management LLC** (File No. 801-7974), a Delaware limited liability company, is an indirect wholly-owned subsidiary of Putnam Investment Management Trust, which is an indirect wholly-owned subsidiary of Marsh & McLennan Companies, Inc. ("MMCI"). MMCI is a publicly-owned holding company traded on the New York Stock Exchange, whose operating subsidiaries are international insurance brokers, investment managers, and management consultants. Putnam Investment Management LLC is the investment adviser for the Putnam Family of Funds and is the sub-adviser to 38 unaffiliated institutional portfolios. As of September 30, 2003, Putnam managed approximately \$272 billion.

Other Relevant Persons

5. **Justin M. Scott**, age 46, joined Putnam in 1988. Scott was managing director and chief investment officer of the International Equities Group for Putnam. Previously, he was an executive director and portfolio manager with Lazard Investors in London, England from 1981 to 1988. Scott is a resident of Marblehead, Massachusetts.

6. **Omid Kamshad**, age 41, joined Putnam in 1996. During the relevant time period, he served as managing director and chief investment officer of the International Core Equity Group for Putnam. Before joining Putnam, Kamshad worked at a number of investment firms as a portfolio manager and director of European equities. Kamshad is a resident of Weston, Massachusetts.

Background

7. Between 1998 and 2003, Justin M. Scott, managing director and chief investment officer of the International Equities Group, and Omid Kamshad, managing director and chief investment officer of the International Core Equity Group, engaged in repeated short-term trading of Putnam mutual funds. Both Scott and Kamshad engaged in short-term trading in their personal accounts of mutual funds over which they had investment decision-making responsibility and about which they had access to non-public information regarding, among other things, current portfolio holdings, valuations and transactions not readily available to all fund shareholders.

8. In addition, four other Putnam employees also engaged in excessive short-term trading of Putnam funds in their personal accounts. Two of these employees, like Scott and Kamshad, traded in funds over which they had investment decision-making responsibility and access to non-public information regarding, among other things, current portfolio holdings, valuations and transactions not readily available to all fund shareholders. In total, between 1998 and 2003, short-term trading by these six employees generated more than \$1 million in gross personal gains.

9. Until 2000, these employees' short-term trading went unchecked by Putnam altogether, which had minimal controls in place to detect and deter such trading. Even after Putnam imposed some controls on employee trading in 2001, Kamshad continued to make short-term exchanges without being warned, let alone stopped, by Putnam.

10. Putnam has known since at least 2000 that certain of its investment professionals were engaging in short-term trading of Putnam funds in their personal accounts. Yet, until on or about October 24, 2003, Putnam failed to disclose these potentially self-dealing transactions to fund boards and to fund shareholders.

11. On or about October 24, 2003, Putnam issued a press release disclosing the employee trading for the first time. That release stated that Putnam was aware of:

. . . short-term trading activity by a small number of our own

employees which we had detected in 2000. Some of this activity appears to have been market timing. In some cases, the activity involved investment professionals trading in funds under their supervision

Omid Kamshad's Short-Term Trading

12. Kamshad was chief investment officer for international equity at Putnam since early 2002. During the relevant time period, he was a portfolio manager for at least seven mutual funds whose portfolios contained international securities. By virtue of his position at Putnam, Kamshad had access to non-public information regarding, among other things, current portfolio holdings, valuations and transactions not readily available to all fund shareholders.

13. Between 1998 and 2003, Kamshad engaged in at least 38 "round trip" trades of Putnam funds, including at least four funds he participated in managing.² In these "round trip" trades, Kamshad sold shares an average of only 13 trading days after purchasing shares in a fund and often sold shares only three or fewer trading days after purchases. As a result of his short-term trading, Kamshad realized hundreds of thousands of dollars in gains. Kamshad typically traded hundreds of thousands of dollars worth of fund shares, and on at least one occasion, the value of his short-term trade exceeded \$1 million.

14. In January 2000, senior Putnam executives learned of "large and frequent movement" of Putnam funds by Kamshad, who at the time served as lead portfolio manager on Putnam's International Equity and Europe Equity funds. At that time, Kamshad's trading came to the attention of senior managers in Putnam's retirement plan group. On January 25, 2000, the director of Putnam's employee relations and staffing unit discussed with Kamshad his frequent trading, and Kamshad said he would cease that type and level of activity. On February 18, 2000, the director issued a memorandum to the file confirming this conversation.

15. Following this discussion, Kamshad continued to engage in short-term trading in Putnam funds. Between February and April 2000, Kamshad made at least nine more round trip trades.

16. Subsequently, in mid-2000, a senior executive at Putnam held a meeting with investment professionals in which he stated that Putnam employees must not engage in short-term trading in Putnam funds and told them that their trading must be beyond reproach. Kamshad, like other Putnam portfolio managers, attended this meeting.

17. Despite the admonitions at that meeting, Kamshad again continued to engage in short-term trading. Between August 2000 and September 2000, he made seven more round trip trades. As recently as March 2003, Kamshad purchased more than \$850,000 worth of shares in Europe Equity, a fund on which he was the lead manager. Four trading days later, he sold Europe Equity shares, garnering a profit of more than \$79,000. In total, Kamshad engaged in at least 20 short-term round trip trades after he was warned about his conduct.

Justin M. Scott's Short-Term Trading

18. Scott was chief investment officer of the international equities group at Putnam. During the relevant time period, he was a portfolio manager for at least five mutual funds whose portfolios contained international securities. By virtue of his position at Putnam, Scott had access to non-public information regarding, among other things, current portfolio holdings, valuations and transactions not readily available to all fund shareholders.

19. Between 1998 and 2000, he engaged in approximately 35 round trip trades in Putnam funds, including funds he participated in managing. In 2000 alone, Scott engaged in at least 12 trades in which he bought and sold mutual fund shares on consecutive days. As a result of his short-term trading, Scott realized hundreds of thousands of dollars in gains. Scott often traded millions of dollars worth of mutual fund shares.

20. On February 18, 2000, Scott, a superior to Kamshad, was copied on a memorandum regarding Kamshad's short-term trading. The memorandum, which addresses the warning given to Kamshad in January 2000, makes clear that short-term trading in large amounts was "inconsistent with our tolerances for standard mutual fund clients." Indeed, as of March 2000, Putnam's Intranet advised employees, among other things, that "[e]xcessive exchanges by a relatively small number of individuals among a number of Putnam's funds have had a detrimental effect on the long-term shareholders of those funds."

21. Nonetheless, Scott continued to engage in short term trades. Between March and May of 2000, Scott made more than 20 round trip trades, including 10 "next day" round trip trades in Putnam funds.

Other Employee Trading

22. Other Putnam employees also engaged in improper market timing and other short-term trading of Putnam funds in their personal accounts. Between 2000 and 2001, a Putnam analyst and member of portfolio management teams of international funds, made approximately 49 round trip trades of Putnam mutual funds, including funds for which he had some responsibility. During the period 2000 to 2002, an international fund portfolio manager made approximately 45 round trip trades of Putnam mutual funds, including at least one fund in which she participated in managing. During the period 2000 to 2003, a co-manager of certain Putnam funds made approximately 36 round trips of Putnam mutual funds, although none appear to have been in funds he managed. Finally, in 2000, an equities analyst made approximately 48 round trip trades of Putnam mutual funds.

Putnam Lacks Controls Dedicated to Detecting and Deterring Short-Term Trading By Employees

23. Although Putnam has engaged in some efforts to detect and deter short term trading in its complex of funds, these efforts failed to prevent its own employees from engaging in short-term trading in Putnam funds.

24. In 1999, Putnam set up a staff of market timing analysts responsible

for monitoring and preventing short-term trading activity at Putnam. This department, colloquially referred to as the "market timing police," was typically staffed by two or three analysts. The market timing police relied on several "screens" that were intended to analyze trading activity and alert Putnam to possible market timing activity.

25. Until 2000, however, there were minimal controls against short-term trading by Putnam's own employees in their Putnam retirement or compensation plans. In particular, there were little or no direct controls dedicated to preventing market timing by investment professionals in funds over which they had management responsibility. Even after 2000, Putnam's system for detecting and preventing market timing by its own employees was fundamentally flawed because it only monitored for market timing during one quarter of a given year, leaving more than nine months of every calendar year without any monitoring whatsoever.

26. In early 2000, Kamshad's trading came to the attention of the market timing police, who then relayed it to the Putnam group that oversees Putnam's own retirement and compensation plans. Until October 2003, however, no disciplinary action was taken against any employee for engaging in market timing or other short-term trading. Until October 2003, Putnam and its portfolio managers did not inform fund boards or fund shareholders of the improper employee trading.

27. Instead, Putnam attempted to address the problem in mid-2000 by holding a meeting of high-level staff, in which senior investment professionals were told not to engage in excessive short-term trading.

28. In 2001, Putnam implemented a control designed to detect and curb fund timing by all Putnam employees. Beginning in 2001, Putnam conducted an annual review of employee trading frequency. However, the review process focused only on one fiscal quarter's worth of trades in Putnam's 401(k) and compensation plans each year. By design, the review could not capture market timing by an employee unless the trading occurred during the one quarter that was selected. Moreover, trading would be examined only if Putnam detected at least eight trades in the quarter. No special scrutiny was given to portfolio managers or other investment professionals.

29. If market timing was detected, the employee was issued written warnings stating that the employee risked losing their exchange privileges in the future if the trading activity did not stop. Even for employees who received warning letters, however, Putnam failed to review trading activity again for one year.

30. In April 2002 -- two years after first learning of market timing by investment professionals in funds they helped manage -- Putnam amended its Code of Ethics to include a prohibition on employee market timing of Putnam funds. At no time, even after amending its Code of Ethics, did Putnam disclose the employee market timing to fund boards or to fund shareholders, until the October 2003 press release described above.

Violations

31. As a result of the conduct described in section III above, Putnam willfully violated Sections 206(1) and 206(2) of the Advisers Act in that it, while acting as an investment adviser, employed devices, schemes, or artifices to defraud clients or prospective clients; and engaged in transactions, practices, or courses of business which operated or would operate as a fraud or deceit upon clients or prospective clients. Specifically, Putnam knowingly, recklessly, and/or negligently failed to disclose to the boards of mutual funds it managed that certain investment management professionals were engaging in potentially self-dealing short-term securities trading. Accordingly, Putnam willfully violated Sections 206(1) and 206(2) of the Advisers Act.

32. As a result of the conduct described in section III above, Putnam willfully violated Section 204A of the Advisers Act in that it, while acting as an investment adviser, failed to establish, maintain, and enforce written policies and procedures reasonably designed, taking into consideration the nature of such investment adviser's business, to prevent the misuse of material, nonpublic information by such investment adviser or any person associated with such investment adviser. Putnam failed to take adequate steps to detect and deter short-term trading of Putnam funds by its portfolio managers and other investment professionals who had access to non-public information regarding, among other things, current portfolio holdings, valuations and transactions not readily available to all fund shareholders. Accordingly, Putnam willfully violated Section 204A of the Advisers Act.

33. Rule 17j-1(c), promulgated under Section 17(j) of the Investment Company Act, requires every registered investment company, and its investment adviser, to, among other things, use reasonable diligence and institute procedures reasonably necessary to prevent violations of their code of ethics. After prohibiting market timing in its code of ethics in 2002, Putnam failed to use reasonable controls to monitor and detect such activity by its employees. Accordingly, Putnam willfully violated Section 17(j) of the Investment Company Act and Rule 17j-1(c) thereunder.

34. As a result of the conduct described in section III above, Putnam failed reasonably to supervise certain employees, including Scott and Kamshad, who were persons subject to Putnam's supervision, with a view to preventing their violations of Sections 206(1) and 206(2) of the Advisers Act. Putnam failed to adopt and implement procedures reasonably designed to detect or prevent the violations of Scott, Kamshad and other employees. Accordingly, Putnam failed reasonably to supervise within the meaning of Section 203(e)(6) of the Advisers Act.

35. In determining to accept the Offer, the Commission considered cooperation afforded the Commission staff by Putnam during its investigation.

Certain Remedial Efforts and Undertakings by the Putnam Funds

36. In determining to accept the Offer, the Commission considered the fact that the independent Trustees of the Putnam funds have undertaken a special investigation of matters related to late trading and market timing. In determining to accept the Offer, the Commission further considered the following efforts voluntarily undertaken by the Putnam funds:

- a. The Putnam funds will operate in accordance with the following governance policies and practices, which the funds have represented are currently in effect:
 - i. no more than 25 percent of the members of the board of Trustees of any Putnam fund will be persons who either (a) were directors, officers or employees of Putnam at any point during the preceding 10 years or (b) are interested persons, as defined in the Investment Company Act, of the fund or of Putnam. In the event that the board of Trustees fails to meet this requirement at any time due to the death, resignation, retirement or removal of any independent Trustee, the independent Trustees will take such steps as may be necessary to bring the board in compliance within a reasonable period of time;
 - ii. no chairman of the board of Trustees of any Putnam fund will either (a) have been a director, officer or employee of Putnam at any point during the preceding 10 years or (b) be an interested person, as defined in the Investment Company Act, of the fund or of Putnam; and
 - iii. any person who acts as counsel to the independent Trustees of any Putnam fund will be an "independent legal counsel" as defined by Rule 0-1 under the Investment Company Act and will not have any employment, consultant, attorney-client, auditing or other professional relationship with Putnam.
- b. The board of Trustees will continue to maintain separate committees primarily dedicated to the oversight of the investment operations of particular categories of funds. Persons who either (a) were directors, officers or employees of Putnam at any point during the preceding 10 years or (b) are interested persons, as defined in the Investment Company Act, of the fund or of Putnam will not comprise a majority of, or serve as chairman of, any such committee. Each such committee will, among its duties, identify any compliance issues that are unique to the category of funds under its review and work with the appropriate board committees (e.g. the Audit and Pricing Committee) to ensure that any such issues are properly addressed.
- c. No action will be taken by the board of Trustees or by any committee thereof unless such action is approved by a majority of the members of the board of Trustees or of such committee, as the case may be, who are not either (i) persons who were directors, officers or employees of Putnam at any point during the preceding 10 years or (ii) interested persons, as defined in the Investment Company Act, of the fund or of Putnam. In the event that any action proposed to be taken by and approved by a vote of a majority of the independent Trustees of a fund is not approved by the full board of Trustees, the fund will disclose such proposal and the related board vote in its shareholder report for such period.
- d. Commencing in 2004 and not less than every fifth calendar year thereafter, each Putnam fund will hold a meeting of shareholders at which the board of Trustees will be elected.

- e. Each Putnam fund will designate a member of the independent administrative staff reporting to its board of Trustees as being responsible for assisting the board of Trustees and any of its committees in monitoring compliance by Putnam with the federal securities laws, its fiduciary duties to fund shareholders and its Code of Ethics in all matters relevant to the operation of the Putnam funds. The duties of this staff member will include reviewing all compliance reports furnished to the board of Trustees or its committees by Putnam, attending meetings of Putnam's Internal Compliance Controls Committee to be established pursuant to Putnam's undertakings set forth in Part IV below, serving as liaison between the board of Trustees and its committees and the Chief Compliance Officer of Putnam, making such recommendations to the board of Trustees regarding Putnam's compliance procedures as may appear advisable from time to time, and promptly reporting to the board of Trustees any material breach of fiduciary duty, breach of the Code of Ethics and/or violation of the federal securities laws of which he or she becomes aware in the course of carrying out his or her duties.

IV.

In view of the foregoing, the Commission deems it appropriate in the public interest and for the protection of investors to impose the sanctions agreed to in Putnam's Offer. Accordingly, it is hereby ORDERED, effective immediately, that:

- A. Pursuant to Section 203(e) of the Advisers Act, Putnam is hereby censured; and
- B. Pursuant to Section 203(k) of the Advisers Act and Section 9(f) of the Investment Company Act, Putnam shall cease and desist from committing or causing any violations and any future violations of Sections 204A, 206(1) and 206(2) of the Advisers Act and Rule 17j-1 (c), promulgated under Section 17(j) of the Investment Company Act.

Undertakings

- C. Employee Trading Restrictions. Putnam (which for this purpose includes any broker-dealer affiliate that acts as principal underwriter for any of the open-end mutual funds advised by Putnam) shall comply with the following undertakings:
 1. Putnam shall require, from and after January 1, 2004, that all Putnam employees placing purchase orders in shares of open-end funds in the Putnam group of investment companies ("Putnam funds") or seeking to redeem or exchange shares of Putnam funds purchased after January 1, 2004 to place such orders through Putnam. Putnam shall add the foregoing requirement to the Code of Ethics maintained by Putnam pursuant to Rule 17j-1 under the Investment Company Act of 1940. Putnam shall use its best efforts to cause its employees to transfer any shares in Putnam funds held in accounts outside of Putnam to accounts maintained at Putnam, other than retirement, pension, deferred compensation and similar

accounts required to be maintained by third party administrators.

"Putnam employee" includes members of the immediate family of a Putnam employee who share the same household as the Putnam employee or for whom the Putnam employee has investment discretion ("family member"), any trust in which a Putnam employee or family member is a trustee with investment discretion and in which such Putnam employee or any family member are collectively beneficiaries, any closely-held entity (such as a partnership, limited liability company or corporation) in which a Putnam employee and his or her family members hold a controlling interest and with respect to which they have investment discretion, and any account (including any retirement, pension, deferred compensation or similar account) in which a Putnam employee or family member has a substantial economic interest and over which said Putnam employee or family member exercise investment discretion.

2. Putnam shall require all Putnam employees to hold any investments they may make in Putnam funds, excluding taxable and tax-exempt money market funds and other short term domestic fixed income funds designed to permit short term investment, for a minimum of 90 calendar days. Putnam's Code of Ethics Oversight Committee may grant exceptions to this 90-day holding period as a result of death, disability or other special circumstances (such as automatic investment and withdrawal programs and periodic rebalancing), all as determined from time to time by such Committee. Putnam shall ensure that any exceptions from the 90-day holding period granted by Putnam's Code of Ethics Oversight Committee are reported to the independent Trustees of the Putnam funds with such frequency as such Trustees request. Putnam shall add the foregoing holding period requirement to the Code of Ethics maintained by Putnam pursuant to Rule 17j-1 under the Investment Company Act.
3. Putnam shall require all Putnam investment employees to hold any investments they may make in Putnam funds or in other registered funds for which Putnam acts as an investment adviser for which they have sole or shared supervisory or portfolio management responsibility, excluding taxable and tax-exempt money market funds and other short term domestic fixed income funds designed to permit short term investment, for a minimum of one year. Putnam's Code of Ethics Oversight Committee may grant exceptions to this one-year holding period as a result of death, disability or other special circumstances (such as automatic investment and withdrawal programs and periodic rebalancing), all as determined from time to time by such Committee. Putnam shall ensure that any exceptions from the one-year holding period granted by Putnam's Code of Ethics Oversight Committee are reported to the independent Trustees of the Putnam funds with such frequency as such Trustees request. Putnam shall add the foregoing holding period requirement to the Code of Ethics

maintained by Putnam pursuant to Rule 17j-1 under the Investment Company Act.

For purposes of the foregoing undertaking, "Putnam investment employee" includes all employees of Putnam's Investment Division, all other employees who, in connection with their regular duties, have access to information regarding portfolio holdings, valuations and transactions, and members of the immediate family of all such employees who share the same household as the Putnam investment employee or for whom the Putnam investment employee has investment discretion ("family member"), any trust in which a Putnam investment employee or family member is a trustee with investment discretion and in which such Putnam investment employee or any family member are collectively beneficiaries, any closely-held entity (such as a partnership, limited liability company or corporation) in which a Putnam investment employee and his or her family members hold a controlling interest and with respect to which they have investment discretion, and any account (including any retirement, pension, deferred compensation or similar account) in which a Putnam investment employee or family member has a substantial economic interest and over which said Putnam investment employee or family member exercise investment discretion.

4. To the extent any Putnam employee is granted an exception to the holding periods pursuant to sections IV.C.2 and IV.C.3 above, Putnam shall take all actions necessary to permit the application by the Putnam funds of a redemption fee on any exchange within 90 days by such employee in an amount equal to that imposed on any similarly situated investors and in no event less than 1.00% of the total redemption amount (calculated at market value).
- D. Employee Trading Compliance. Putnam (which for this purpose includes any broker-dealer affiliate that acts as principal underwriter for any of the open-end mutual funds advised by Putnam) shall comply with the following undertakings:
 1. Putnam shall require that employee trading compliance be reviewed by Putnam's Chief Compliance Officer or a member of his or her staff and that employee trading compliance violations be reported to the Code of Ethics Oversight Committee for the imposition of an appropriate sanction. The minimum sanction for an initial violation shall be disgorgement of any profit on a redemption from a Putnam fund that is made prior to the expiration of either the 90-day or the one-year holding period, whichever is applicable. Putnam shall add the foregoing sanction provision to the Code of Ethics maintained by Putnam pursuant to Rule 17j-1 under the Investment Company Act. Putnam shall provide a report of any compliance sanctions with respect to either the 90-day or one-year holding periods to the independent Trustees of the Putnam funds with such frequency as the Trustees of such funds request, and in any event at least quarterly.

2. Putnam shall use its reasonable best efforts to build within a reasonable time following the date of this Order an automated system that will prevent on a pre-trade basis redemptions by Putnam employees from their investments in Putnam funds that are maintained on Putnam's recordkeeping systems before expiration of the 90-day or one-year holding periods, as applicable.
3. Putnam shall transfer responsibility for employee trading compliance from the Putnam Human Resources Department to the Putnam Legal and Compliance Department under the supervision of Putnam's Chief Compliance Officer, and shall complete said transfer by no later than December 31, 2003.
4. Putnam shall establish and staff a full-time senior-level position whose responsibilities shall be principally concerned with compliance matters related to personal investing by Putnam employees. This officer will report directly to the Chief Compliance Officer of Putnam.
5. Putnam shall require the Chief Compliance Officer of Putnam to report to the independent Trustees of the Putnam funds any breach of fiduciary duty and/or the federal securities laws of which he or she becomes aware in the course of carrying out his or her duties, with such frequency as the independent Trustees may instruct, and in any event at least quarterly, provided however that any material breach (i.e., any breach that would be important, qualitatively or quantitatively, to a reasonable Trustee) shall be reported promptly.
6. Putnam shall maintain a compliance and ethics oversight infrastructure having the following characteristics:
 - a. Putnam shall maintain a Code of Ethics Oversight Committee having responsibility for all matters relating to issues arising under the Putnam Code of Ethics. The Code of Ethics Oversight Committee shall be comprised of senior executives of Putnam's operating businesses. Putnam shall hold at least quarterly meetings of the Code of Ethics Oversight Committee to review violations of the Code of Ethics, as well as to consider policy matters relating to the Code of Ethics. Putnam shall report on issues arising under the Code of Ethics, including all violations thereof, to the Audit Committee of the Trustees of the Putnam funds with such frequency as the Audit Committee may instruct, and in any event at least quarterly, provided however that any material violation shall be reported promptly.
 - b. Putnam shall establish an Internal Compliance Controls Committee to be chaired by Putnam's Chief Compliance Officer, which Committee shall have as its members senior executives of Putnam's operating businesses. Notice of all meetings of the Internal Compliance Controls Committee shall be given to the independent staff of the

Trustees of the Putnam funds, who shall be invited to attend and participate in such meetings. The Internal Compliance Controls Committee shall review compliance issues throughout the business of Putnam, endeavor to develop solutions to those issues as they may arise from time to time, and oversee implementation of those solutions. The Internal Compliance Controls Committee shall provide reports on internal compliance matters to the Audit Committee of the Trustees of the Putnam funds with such frequency as the independent Trustees of such funds may instruct, and in anyevent at least quarterly. Putnam shall also provide to the Audit Committee of Marsh & McLennan Companies, Inc. the same reports of the Code of Ethics Oversight Committee and the Internal Compliance Controls Committee that it provides to the Audit Committee of the Putnam funds.

7. Putnam shall establish a corporate ombudsman to whom Putnam employees may convey concerns about Putnam business matters that they believe implicate matters of ethics or questionable practices. Putnam shall establish procedures to investigate matters brought to the attention of the ombudsman, and these procedures shall be presented for review and approval by the independent Trustees of the Putnam funds. Putnam shall also review matters brought to the attention of the ombudsman, along with any resolution of such matters, with the independent Trustees of the Putnam funds with such frequency as the independent Trustees of such funds may instruct.

E. Restitution. Putnam shall also comply with the following undertakings:

1. Putnam shall retain, within 30 days of the date of entry of the Order, the services of an Independent Assessment Consultant acceptable to the staff of the Commission and the independent Trustees of the Putnam funds. The Independent Assessment Consultant's compensation and expenses shall be borne exclusively by Putnam. The Independent Assessment Consultant shall calculate the monetary amounts necessary to fairly compensate Putnam funds' shareholders for losses attributable to excessive short-term trading and market timing trading activity by Putnam employees according to a methodology developed in consultation with Putnam and acceptable to the staff of the Commission and the independent Trustees of the Putnam funds. Putnam shall cooperate fully with the Independent Assessment Consultant and shall provide the Independent Assessment Consultant with access to its files, books, records, and personnel as reasonably requested for the review.
2. At the conclusion of the review, which in no event shall be more than 120 days after the date of entry of the Order, the Independent Assessment Consultant shall submit to Putnam and the staff of the Commission an Assessment Report stating

the determinations and calculations called for by subparagraph IV.E.1 of these undertakings.

3. The determinations and calculations of the Independent Assessment Consultant shall be binding unless, within 150 days after the date of entry of the Order, Putnam or the staff of the Commission advises, in writing, the Independent Assessment Consultant of any determination or calculation from the Assessment Report that it considers to be inappropriate and states in writing the reasons for considering such determination or calculation inappropriate.
4. With respect to any determination or calculation with which Putnam or the staff of the Commission do not agree, such parties shall attempt in good faith to reach an agreement within 180 days of the date of entry of the Order. In the event that Putnam and the staff of the Commission are unable to agree on an alternative determination or calculation, the determinations and calculations of the Independent Assessment Consultant shall be binding.
5. Within 195 days of the date of entry of the Order, Putnam shall take all necessary and appropriate steps to compensate the funds' shareholders in accordance with the binding determinations and calculations reached in accordance with the procedure set forth above.
6. The Independent Assessment Consultant, for the period of the engagement and for a period of two years from completion of the engagement, shall not enter into any employment, consultant, attorney-client, auditing or other professional relationship with Putnam, or any of its present or former affiliates, directors, officers, employees, or agents acting in their capacity as such. Any firm with which the Independent Assessment Consultant is affiliated in performance of his or her duties under the Order shall not, without prior written consent of the independent Trustees and the staff of the Commission, enter into any employment, consultant, attorney-client, auditing or other professional relationship with Putnam, or any of its present or former affiliates, directors, officers, employees, or agents acting in their capacity as such for the period of the engagement and for a period of two years after the engagement.

F. Independent Compliance Consultant. Putnam shall also comply with the following undertakings:

1. Putnam shall retain, within 30 days of the date of entry of the Order, the services of an Independent Compliance Consultant acceptable to the staff of the Commission and the independent Trustees of the Putnam funds. The Independent Compliance Consultant's compensation and expenses shall be borne exclusively by Putnam or its affiliates. The Independent Compliance Consultant shall conduct a comprehensive review of Putnam's supervisory, compliance, and other policies and

procedures designed to prevent and detect breaches of fiduciary duty, breaches of the Code of Ethics and federal securities law violations by Putnam and its employees. This review shall include, but shall not be limited to, a review of Putnam's market timing controls across all areas of its business, a review of the Putnam funds' pricing practices that may make those funds vulnerable to market timing, and a review of the Putnam funds' utilization of short term trading fees and other controls for deterring excessive short term trading. Putnam shall cooperate fully with the Independent Compliance Consultant and shall provide the Independent Compliance Consultant with access to its files, books, records, and personnel as reasonably requested for the review.

2. At the conclusion of the review, which in no event shall be more than 120 days after the date of entry of the Order, the Independent Compliance Consultant shall submit a Report to Putnam, the Trustees of the Putnam funds, and the staff of the Commission. The Report shall address the issues described in subparagraph IV.F.1 of these undertakings, and shall include a description of the review performed, the conclusions reached, the Independent Compliance Consultant's recommendations for changes in or improvements to policies and procedures of Putnam and the Putnam funds, and a procedure for implementing the recommended changes in or improvements to Putnam's policies and procedures.
3. Putnam shall adopt all recommendations with respect to Putnam contained in the Report of the Independent Compliance Consultant; provided, however, that within 150 days after the date of entry of the Order, Putnam shall in writing advise the Independent Compliance Consultant, the Trustees of the Putnam funds and the staff of the Commission of any recommendations that it considers to be unnecessary or inappropriate. With respect to any recommendation that Putnam considers unnecessary or inappropriate, Putnam need not adopt that recommendation at that time but shall propose in writing an alternative policy, procedure or system designed to achieve the same objective or purpose.
4. As to any recommendation with respect to Putnam's policies and procedures on which Putnam and the Independent Compliance Consultant do not agree, such parties shall attempt in good faith to reach an agreement within 180 days of the date of entry of the Order. In the event Putnam and the Independent Compliance Consultant are unable to agree on an alternative proposal acceptable to the staff of the Commission, Putnam will abide by the determinations of the Independent Compliance Consultant.
5. Putnam (i) shall not have the authority to terminate the Independent Compliance Consultant, without the prior written approval of the independent Trustees and the staff of the Commission; (ii) shall compensate the Independent Compliance Consultant, and persons engaged to assist the Independent

Compliance Consultant, for services rendered pursuant to the Order at their reasonable and customary rates; (iii) shall not be in and shall not have an attorney-client relationship with the Independent Compliance Consultant and shall not seek to invoke the attorney-client or any other doctrine or privilege to prevent the Independent Compliance Consultant from transmitting any information, reports, or documents to the Trustees or the Commission.

6. The Independent Compliance Consultant, for the period of the engagement and for a period of two years from completion of the engagement, shall not enter into any employment, consultant, attorney-client, auditing or other professional relationship with Putnam, or any of its present or former affiliates, directors, officers, employees, or agents acting in their capacity as such. Any firm with which the Independent Compliance Consultant is affiliated in performance of his or her duties under the Order shall not, without prior written consent of the independent Trustees and the staff of the Commission, enter into any employment, consultant, attorney-client, auditing or other professional relationship with Putnam, or any of its present or former affiliates, directors, officers, employees, or agents acting in their capacity as such for the period of the engagement and for a period of two years after the engagement.
- G. Periodic Compliance Review. Commencing in 2005, and at least once every other year thereafter, Putnam shall undergo a compliance review by a third party, who is not an interested person, as defined in the Investment Company Act, of Putnam. At the conclusion of the review, the third party shall issue a report of its findings and recommendations concerning Putnam's supervisory, compliance, and other policies and procedures designed to prevent and detect breaches of fiduciary duty, breaches of the Code of Ethics and federal securities law violations by Putnam and its employees in connection with their duties and activities on behalf of and related to the Putnam funds. Each such report shall be promptly delivered to Putnam's Internal Compliance Controls Committee and to the Audit Committee of the board of Trustees of each Putnam fund.
- H. Certification. No later than twenty-four months after the date of entry of the Order, the chief executive officer of Putnam shall certify to the Commission in writing that Putnam has fully adopted and complied in all material respects with the undertakings set forth in this section IV and with the recommendations of the Independent Compliance Consultant or, in the event of material non-adoption or non-compliance, shall describe such material non-adoption and non-compliance.
- I. Recordkeeping. Putnam shall preserve for a period not less than six years from the end of the fiscal year last used, the first two years in an easily accessible place, any record of Putnam's compliance with the undertakings set forth in this section IV.
- J. Deadlines. For good cause shown, the Commission's staff may extend

any of the procedural dates set forth above.

K. Other Obligations and Requirements. Nothing in this Order shall relieve Putnam or any Putnam fund of any other applicable legal obligation or requirement, including any rule adopted by the Commission subsequent to this Order.

Civil Money Penalties and Other Monetary Relief

L. In addition to the payment of restitution called for by section IV.E herein, Putnam shall pay a civil money penalty and other monetary relief, if any, in an amount to be determined either through a settlement or, if no settlement is reached, in an amount to be determined after a hearing. At that hearing, the issues will be limited to determining the appropriateness and amount of any such civil money penalty and other monetary relief. For purposes of the hearing, Putnam will be precluded from arguing that it did not violate the federal securities laws in the manner described herein, and the findings contained herein shall be accepted as and deemed true by the hearing officer. Without contesting the facts contained herein, either party shall be allowed to present evidence relating to the factors set forth in Section 203(i) of the Advisers Act and to present additional evidence relevant to the determination of what amount of civil money penalty or other monetary relief is appropriate. Furthermore, at that hearing, Putnam may not challenge the validity of its Offer or this Order.

By the Commission.

Jonathan G. Katz
Secretary

1 The findings herein are made pursuant to Respondent's Offer of Settlement and are not binding on any other person or entity in this or any other proceeding.

2 A round trip trade is one in which the employee bought and then sold mutual fund shares. The actual number of round trip trades was much larger because Kamshad, Scott and other employees often traded in multiple personal accounts on the same days. For example, if Kamshad purchased mutual fund shares and then sold shares two days later, that transaction is alleged herein to be one round trip trade, even though he may have spread the purchase and sale over two or three different personal accounts on those days.

<http://www.sec.gov/litigation/admin/ia-2192.htm>